

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

SINGULAR COMPUTING LLC,

Plaintiff,

v.

GOOGLE LLC,

Defendant.

C.A. No. 1:19-cv-12551-FDS

Hon. F. Dennis Saylor IV

**DEFENDANT GOOGLE LLC’S REPLY IN SUPPORT OF ITS
MOTION FOR LEAVE TO SUPPLEMENT ITS
NON-INFRINGEMENT AND INVALIDITY CONTENTIONS**

Singular's Opposition to Google's Motion to Amend largely does not contest the supplementation that Google seeks to make to its contentions in response to the Court's claim construction ruling. Those supplementations, listed in Part I below, should be permitted because Singular does not even attempt to refute the good cause and lack of prejudice that Google set forth in its moving papers. As to the two supplementations for which Singular opposes Google's motion, the Court should overrule Singular's objections, which are based on a misunderstanding of the proposed supplementation.

First, with respect to the GRAPE-3 prior art reference, Singular mischaracterizes Google's supplementation as an attempt to add a new reference called PROGRAPE. To the contrary, Google is still relying on the GRAPE-3 prior art system that Google previously disclosed in its March 1, 2021 invalidity contentions. The only proposed supplement is to address how GRAPE-3, in combination with other references, render the claims obvious in light of Singular's claim construction positions that the Court adopted. Singular admits it had notice of the references with which Google proposes to combine GRAPE-3, namely Hamada and Lienhart. Thus, Singular's pointing to PROGRAPE as a new system reference for which it requires discovery is a red herring: Google is relying on an existing system reference, GRAPE-3, which it had previously disclosed, and proposing to combine it with two previously disclosed articles to address the effect of the Court's claim construction ruling. That one of the articles mentions the PROGRAPE system is of no moment, because Google is only relying on the article to address certain aspects of an obvious combination; it is not relying on PROGRAPE as a new system reference. This kind of supplementation is precisely what Local Rule 16.6(d)(5)(A) contemplates, and Singular cannot and does not distinguish the authority Google cites.

Second, with respect to Google’s proposed supplemental non-infringement argument based on the claim construction that Singular apparently intends to maintain on appeal of the IPR decision, this is not a new argument. Rather, Google is simply supplementing its prior contention to emphasize how Singular’s appellate position supports the non-infringement contention Google already included in its March 1, 2021 contentions. Singular makes no attempt to address this critical point made in Google’s moving papers, and instead incorrectly asserts that Google is making a new non-infringement contention. Furthermore, Singular does not contest the lack of prejudice: Singular took full discovery on the non-infringement argument that it now characterizes as “new.” Ultimately, Singular’s objection to Google’s supplementation is an attempt to profit from inconsistent positions: it wants to argue infringement under a broader construction here while advancing a narrower construction in the Federal Circuit to preserve validity, even though its own expert has admitted this construction would lead to non-infringement in this case, as Google explained in its opening Memorandum.¹

I. The Court should permit the supplementations for which Singular offered no opposing argument.

Singular does not offer any argument opposing most of the supplementations that Google seeks to make in its invalidity and non-infringement contentions; specifically:

- All proposed supplementation to the non-infringement contentions to account for the Court’s adoption of Singular’s proposed claim constructions. Mtn. at 6-10 (Part IV.A.1.i); *see also* Mtn., Ex. 1 at 4, 9 (redline version of proposed Second

¹ Singular states that it no longer intends to assert invalidated claims 4 and 13 of the ’961 patent in this case. If and when Singular dismisses the ’961 patent with prejudice from this case, Google’s request to amend contentions regarding that patent would be moot. Until that time, however, Singular’s appeal of the PTAB’s final written decision means that decision is not final, and thus Google seeks to supplement its contentions regarding that patent to ensure its rights are preserved (and to avoid waiver).

Amended Responsive Contentions Regarding Non-Infringement and Invalidity (“PSC”)) & Ex. 2 (redline version of proposed supplemental Amended Non-Infringement Contentions).

- All proposed supplementation to the invalidity contentions to account for the Court’s adoption of Singular’s proposed claim constructions as to the Belanovic/Leeser, Cray, and CNAPS systems. Mtn. at 10-12 (Part IV.A.1.ii); *see also* Mtn., Ex. 1 at 23-24, 26, 32-33 (PSC) & Exs. 3-5 (redline versions of proposed supplements to invalidity claim charts for Belanovic/Leeser, Cray & CNAPS related to claim construction order)

Google set forth good cause for these supplementations in its moving papers based on Local Rule 16.6(d)(5)(A) and related case law authority. *See* Mtn. at 5-12. In light of Singular’s failure to offer any opposing argument or otherwise attempt to contest Google’s good cause showing, the Court should permit these supplementations.

II. Google has demonstrated good cause for its limited supplementation regarding the previously charted GRAPE-3 system; Singular’s lack of diligence argument relies on a mischaracterization of Google’s limited supplementation.

Singular does not dispute that the Court adopted Singular’s proposed claim construction positions, or that the proposed supplements to GRAPE-3 relate to the Court’s adoption of those positions. Thus, Singular has not disputed Google’s good cause showing under Local Rule 16.6(d)(5)(A). *See* Mtn. at 10-12 (argument regarding cause of supplementing invalidity contentions); Mtn., Ex. 6 (redlined claim chart with proposed supplements regarding GRAPE-3).

The only remaining question is whether Singular has shown that allowing Google’s proposed amendment would result in prejudice. Google is not, as Singular asserts, seeking to introduce a new prior art device to avoid estoppel following the PTAB’s final written decision. Rather, as evidenced by the limited redlines to Google’s cover pleading, *see* Mtn., Ex. 1 at 26, and

to the previously disclosed claim chart regarding GRAPE-3, *see* Mtn., Ex. 6, it is the previously disclosed GRAPE-3 system that Google is relying on. Indeed, Google expressly disclosed “the GRAPE-3 computer” in an invalidity reference in its cover pleading, Mtn., Ex. 1 at 25, and charted that computer based on an article describing its capability, Mtn., Ex. 6 at 1. Google is not, as Singular argues, seeking to add a new theory regarding the “PROGRAPE” device referenced in the Hamada article. *See* Opp. at 9. Rather, Google is only relying on the previously disclosed Hamada article as a reference to combine with GRAPE-3 in light of the *Markman* order. That the article refers to a system, PROGRAPE, doesn’t mean that Google is relying on the system. Moreover, Singular had ample opportunity to take discovery regarding the GRAPE-3 device during the fact discovery period, and Singular *admits* it knew about the articles it is now complaining it didn’t have a chance to take discovery about. Opp. at 3. Discovery regarding the one issue Singular identifies, public availability (Opp. at 4-5), would not have had any effect: it is indisputable that GRAPE-3, created in the early 1990s, long predates Dr. Bates’ 2009 patent application, and that the articles are also prior art to Dr. Bates’ patent. Moreover, because GRAPE-3 is a system prior art reference, it is not subject to estoppel following the PTAB’s final written decision, meaning that Singular’s entire discussion of estoppel is irrelevant to the issue before the Court.

Singular’s opposition therefore reduces to whether Google should be allowed to supplement its contentions as to the GRAPE-3 system by referencing the previously disclosed Hamada and Lienhart articles. Google’s Hamada and Lienhart supplementation relates directly to Singular’s positions that the Court adopted in the *Markman* order. *See* Opp. at 2. Specifically, Google proposed to add these references to the contentions to show that “it was known to combine logarithmic-based arithmetic units such as those of GRAPE-3 with addressable memory paired

with the processing element(s) and control for the processing elements,” *see* Mtn., Ex. 1 at 26. Addressable memory and control for the processing elements were Singular’s positions that the Court adopted in the *Markman* order, *see* Mtn. at 6-10²; therefore, Google’s proposed supplementation regarding how it would have been obvious to combine the previously disclosed GRAPE-3 system with prior art that met those additional limitations falls squarely within the parameters of allowable post-*Markman* supplementation under Rule 16.6(d)(5)(A). *See, e.g., Treehouse Avatar LLC v. Valve Corp.*, No. C17-1860-RAJ, 2020 WL 2800723, at *1-2 (W.D. Wash. May 29, 2020) (granting leave to amend non-infringement and invalidity contentions following issuance of claim construction order adopting plaintiff’s proposed construction); *Celgene Corp. v. Natco Pharma Ltd.*, No. 10-5197 (SDW)(SCM), 2015 WL 4138982, at *3-5 (D.N.J. July 9, 2015) (granting motion to amend invalidity contentions following issuance of claim construction order adopting plaintiff’s proposed construction); *Positive Techs., Inc. v. Sony Elecs., Inc.*, No. C 11-2226 SI, 2013 WL 322556, at *2-4 (N.D. Cal. Jan. 28, 2013) (granting motion to amend invalidity contentions following issuance of claim construction order wherein court adopted adverse construction).

There is no lack of diligence because Google had no reason to disclose this proposed obviousness combination until the Court adopted Singular’s claim construction position. And there’s no prejudice to Singular because (i) it doesn’t identify what discovery it would have taken regarding the Hamada and Lienhart articles, which long predate Dr. Bates’ patent application, and

² Specifically, the combination with these references relates to the Court having adopted Singular’s proposed construction of “execution unit,” which, unlike Google’s proposed construction, included a “memory circuit.” Memorandum and Order on Claim Construction (“CC Order”), Dkt. No. 354, at 25; Mtn. at 3. The combination also relates to the Court’s reasoning to support this construction, under which a processing element must be controllable based on control signals received by the processing element. CC Order at 23-24; Mtn. at 8.

(ii) Singular admits it had notice of these articles going back to November 2020, when Google produced them as part of the production accompanying its invalidity contentions. *See Opp.* at 3.

In sum, there is no lack of diligence—Singular’s only basis for objecting to Google’s supplementation—because Google’s proposed supplementation relates directly to the *Markman* order. Moreover, Singular does not argue, and has not shown, prejudice arising from the proposed supplementation.

III. Google has good cause to supplement its non-infringement contentions to reflect a claim construction Singular apparently intends to argue at the Federal Circuit; Singular suffers no prejudice because Google previously disclosed the non-infringement argument.

Singular’s Opposition fails to address—and thus does not dispute—the critical point regarding Google’s proposed supplementation in response to Singular’s positions in the IPR proceedings: that Google’s proposed supplementation does not add a new non-infringement argument. Mtn. at 16. Rather, the proposed supplementation provides additional support for a non-infringement argument that Google already disclosed in its March 1, 2021 amended non-infringement contentions. Indeed, this is demonstrated by Google’s quotation of the original non-infringement contention in its opening Memorandum of Law. *Id.* (quoting Mtn., Ex. 2 (redline version of Google’s proposed Amended Non-Infringement Contentions)). Singular does not grapple at all with this fact, or the fact, as also explained in detail in Google’s opening memo, that Singular took discovery expressly directed to this non-infringement theory. *See Mtn.* at 15. Thus, Singular has no basis to argue prejudice.

Singular’s diligence argument similarly fails to address Google’s core argument: Google is not seeking to supplement its non-infringement contentions to account for a claim construction position that Singular argued in the PTAB *and lost*; instead, Google is doing so because Singular has indicated it intends to maintain its position in its appeal before the Federal Circuit of the

PTAB's decision. As explained in its Motion, only because of Singular's appeal, in which it first identified the PTAB's claim construction as an issue on July 12, 2022, does Google propose to supplement to show how that claim construction position supports a non-infringement contention Google previously disclosed. Mtn. at 2, 12-16; *see also* Mtn., Exs. 13-15 (Patent Owner's Notices of Appeal ('273, '156, '961 Patents) (July 12, 2022)). Thus, there is no lack of diligence on Google's part.

Singular's lack of diligence argument fails for another reason as well. Google had no reason to identify Singular's proposed claim construction as supporting Google's non-infringement position while the IPR proceeding was pending; it was possible that the PTAB would reject Singular's position, which is exactly what happened. In fact, Google already stated in its contentions that if Singular took the position that it did in Singular's proposed PTAB claim construction, then Google would not infringe.³ But once Singular made clear that it was going to maintain this claim construction position on appeal to the Federal Circuit, Google sought to timely supplement its related non-infringement contentions.

Ultimately, Singular seeks to profit from taking inconsistent positions: it wants to argue infringement in this Court based on one construction, while seeking a different construction from the Federal Circuit under which, as explained in Google's opening Memo, Singular's own expert effectively admits Google's TPUs would not infringe. *See* Mtn. at 13-14. The potential for inconsistent outcomes justifies supplementing Google's contentions in any circumstance, but it's especially true here, where Singular does not dispute that it had notice of, and even took discovery on, the non-infringement argument at issue.

³ The details regarding why Google would not infringe under Singular's proposed claim construction in the PTAB (and anticipated position on appeal) are set forth in the sealed portion of Google's opening papers. Mtn. at 12-16.

IV. CONCLUSION

For all of the foregoing reasons, as well as the reasons set forth in its original motion and memorandum of law, Google requests that its Motion to Supplement be granted.

Respectfully submitted,

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